Unit 4 Study Sheet

Property: Zero as an Exponent:

For any nonzero number a, a^0 = _____.

Ex: $(4x^2)^0$ = _____.

Property: Negative Exponents:

$\mathbf{a^{-m} = \frac{1}{a^m}}$ $\qquad$ $\mathbf{\frac{1}{a^{-m}} = a^m}$

*If a negative exponent is in the _____, move it to the _____ and make it _____.

*If a negative exponent is in the _____, move it to the _____ and make it _____.

Ex: x^{-2} = _____ $\qquad$ Ex: $\frac{a^{-3}}{b^{-2}}$ = _____

Property: Multiplying Powers with the Same Base:
When multiplying powers with the same base, keep the base the same and _____ the exponents.

Ex: x^3x^5 = _____ $\qquad$ Ex: $a^{-8}a^{10}$ = _____

Property: Powers to Powers

When raising a power to a power, _____ the

_____!

For the coefficients, use _____ exponent rules!

Ex: $(x^4)^2$ = _____ Ex: $(3x^4)^2$ = _____

If there are multiple variables inside the parentheses,

_____ the exponent to EACH

_____!

Ex: $(x^5y^6)^3$ = _____

Property: Division Property of Exponents

When dividing powers, _____ the exponents!

Ex: $\frac{x^{10}}{x^7}$ = Ex: $\frac{x^7}{x^{10}}$ = _____

Any Helpful Hints?

- _____
- _____
- _____
- _____

simple interest: interest on _____ only

Simple Interest Formula:

compound interest: interest on _____ and

_____ already _____

Compound Interest Formula:

Types of Compound Interest:

Type of Interest	**Divide Annual Interest Rate by…. Multiply Number of Years by...**
Annual	
Semi-Annual	
Quarterly	
Monthly	

Exponential Growth/Decay Formula (label the parts):
To Find Interest Rate Given Annual Rate:
To Find # of Time Periods:
Two Types of Exponential Decay (and how to find b in each):